

City of Newton

Five Year Technology Vision and Plan

FY14 - FY19

*The Garden City*



# City of Newton Technology Vision and Five Year Plan

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Recommendations of the City of Newton Technology Cluster  
FY14 – FY19

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## Executive Overview

Developing a meaningful five-year municipal technology vision encompassing the explosive rate of advancement in technology is a daunting task. The technological evolution from mainframes, to minicomputers, to personal computers, to the worldwide web, and now to virtual servers and the “cloud” has changed the way business is conducted. And while it is hard to imagine that the technology evolution can continue, it appears we are on the brink of a new technological paradigm.

Current trends include moving applications and software from dedicated servers to virtual servers with storage area networks, in an effort to establish a downsized yet more versatile IT infrastructure that reduces the data center foot print, is easier to administer and significantly reduces energy costs. “Cloud computing” is expected to further shift technology from internal infrastructure solutions to cloud-based strategies that will deliver increased functionality and flexibility using a mix of public and private cloud-based application and platform services. Data security and data privacy will remain paramount requiring automated capabilities that detect, assess, and respond immediately to threats.

During the past several years, technology has become more local, social and mobile, with smart phones capable of acting as standalone computer devices that can take pictures, search the Internet, and send emails and text messages. It is anticipated that a desire for an improved “user experience” will drive the creation of more layered approaches in application design with the emphasis on increasing citizen services and untethering desktop workers by providing wireless devices, increased mobility, and improved efficiency for employees and citizens alike.

Establishing a vision and positioning the City of Newton for the future requires an evaluation of current infrastructure, applications, security, and customer interfaces, an understanding of the future of technology, and the development of a blueprint for investments in and modernization of the City’s technology. IT entities must always ask themselves “How can technology enhance and enrich the lives of Newton’s students, residents and businesses?”

### **Findings: The Five Year Technology Vision**

- ❖ **Installation of the City Wide Fiber Optic Network:** This is the foundation to the City's infrastructure and the basis for all initiatives to follow;
- ❖ **Migration of municipal users to "Microsoft Exchange" in the Cloud:** The email and calendar system will dramatically increase efficiencies and meet the needs of the administration;
- ❖ **Preparation of municipal and school facilities for the convergence of Voice, Data, Video and the onslaught of media based technology:** Currently, most homes already have voice, data and video "on the same wire". The advantages of introducing similar technology throughout our municipal buildings will result in exponential savings;
- ❖ **Preparation of our networks, users and administrations for the impacts of social media, BYOD, cloud-based applications and storage, and the new age of mobility;** This will be promoted by continuing our Technology Cluster, maintaining quality dialog, coordinating projects across departments and maintaining an awareness of changing technology;
- ❖ **Consolidating systems to achieve transparency and pursuing integrated application solutions that reduce redundant labor and consume time.** Make no commitments to new systems, software or hardware, without diligently communicating the possibility of a project to all departments;
- ❖ **Protection of the City, its people and their data:** We must close our doors, both physically and metaphorically, using the best tools available, reliable systems, video surveillance, and sound policies;
- ❖ **Implementation of the conversion to Voice Over IP (VoIP);** Cost savings, mobility, simplified administration, media services and a removal of the segregation of data open new opportunities;
- ❖ **Consolidate purchases through the core IT entities:** Ensure purchases are consistent, compatible, fair, and address the needs of all departments;
- ❖ **Implementation of the Technology Disaster Recovery Plan:** Utilizing current business continuity and backup solutions by implementing Disk Deduplication, managed Uninterrupted Power Supplies (UPS) and HVAC and Redundant Servers;
- ❖ **Consolidation of data centers:** Consolidate systems, silos, and computer rooms across the City;
- ❖ **Improved quality of experience of customer service at all levels using technology:** From our web offerings and custom applications to developing services for smartphones, we must continue to meet the need as well as keep pace with what our residents expect from us; and
- ❖ **Continuation of the Technology Cluster:** Our successes have been measurable and effective.

## Background

### **IT Advisory Committee**

In early 2011, Mayor Setti Warren sought out interested and professionally involved IT-knowledgeable citizens to team with selected staff and a member of the Board of Aldermen to form an IT Advisory Committee. The charge of the Committee was to review, over the course of nine months, the current City IT responsibilities, services and processes, and in collaboration with City management, provide recommendations to shape a vision by which technology staff could conduct needed functions more efficiently and effectively, and expend resources wisely and in a timely manner. While it has been well documented that greater investments in IT needed to be made, given the high competition for capital funds and the constantly changing nature of technology, it was imperative that experts be assembled who had a working knowledge of the state of the City's business and an interest in the effective expenditure of taxpayer dollars.

The IT Advisory Committee reviewed the **Blue Ribbon Commission** and **Citizen Advisory Group** reports. The committee also interviewed cities and towns with admirable technology initiatives and used the Internet to research similar documents produced by other United States cities and towns. The committee was comprised of an excellent group of forward thinking technologists with only the best interest of the City in mind. Their findings would be used as a starting point when recommending a technological path for the City to follow.

The two primary recommendations of the IT Advisory Committee were to create a Chief Information Officer position within the City's senior management team and to install a fiber network to all City buildings. Secondary recommendations were as follows:

- Produce a 3 or 5-year Technology Plan to serve as a roadmap for investments in, and modernization of technology. This would be reviewed quarterly and shared with department heads.
- Establish a review and approval process for citywide technology purchases to capture cost savings where possible.
- Consolidate cross-department software and hardware purchasing to standardize where possible to increase efficiencies.
- Establish regular IT leadership meetings and governance structure to coordinate city-wide technology strategy, work prioritization and communication among departments.
- Create application standards and technical framework for making application investment decisions.
- Establish a replacement plan for obsolete and end-of-life technology equipment to assure business continuity.
- Undertake an analysis of cloud-based (outsourced) solutions to reduce the city's technology footprint.
- Undertake an analysis of the city's data centers for potential consolidation to achieve operational efficiencies and cost savings.
- Create a disaster recovery plan for critical IT services and systems.

## Technology Cluster

In 2013 Mayor Warren challenged senior IT representatives from across the city, including the Police Department, Fire Department, Newton Public Schools, Newton Free Library, Financial Information Systems, Department of Public Works, and the Information Technology Department. Led by the City's Chief Information Officer, the Technology Cluster was created to build on the experience, insight, and recommendations of the IT Advisory Committee to develop a vision and technology plan to guide the city for the next five years.

With the creation of the Technology Cluster, many commonalities have emerged in areas of infrastructure and application needs, current and future projects, and an overall technology vision for the future for the City of Newton. The members of the group openly discussed department needs, challenges, and barriers to success. Much discussion focused around how technology would benefit the residents of Newton and how automation of the website could create new efficiencies especially with respect to online payments. Not surprisingly, along the way members found themselves providing solutions for each other in methods and means never anticipated. For instance, through the dialogue created and the "breaking down of silo mentalities" the group has spearheaded the repurposing of School WiFi devices and Library software and equipment, saving the city thousands of dollars.

As the comfort level among the group has grown, so too have the discussions, blossoming into meaningful dialogue, piquing the interest of all, and having a positive impact on cost savings, customer service, efficiencies, new methods of two way communications, public safety and public convenience.

## Categorizing the Plan - Overview

With the recommendations of the IT Advisory Committee serving as the core of the City's five year plan, some broad categories were defined to correlate the projects into a framework for better interpretation and planning. These categories: Infrastructure; Software, Applications and Process Improvement; Security; and User Support and Training form the basis of all detailed initiatives and technology concerns.

### **Infrastructure**

**Components:** *Physical Plant, Fiber, Copper, Redundancy, Data Centers, Wireless, Convergence, and the future of Voice, Data and Video.*

**Overview:** A modern, redundant fiber network is a primary need. It is paramount in enabling the City to build a mirror-imaged, disaster-prepared system capable of keeping financial systems, public safety, and other critical data available in the event of catastrophe and is also a critical component as the Newton Public Schools move their technology forward. The "loop" design ensures a secondary path to any location and with "spanning tree enabled switches" costs for multiple paths can be kept in check. Extra fiber strands will allow dedicated connections outside of the data network for special projects, security initiatives, one time interactive projects and even live feeds to NewTV.

The City phone system was installed in the early 2000's. The system is a conventional service with many limitations. Once considered financially out of reach for municipalities, the installation of a state of the art fiber network allows a systematic upgrade to a scalable, mobile, robust VoIP offering many opportunities, such as elimination of phone wiring, cost savings, and improved functionality such as auto attendant, voice mail, ring groups, advanced reporting, and even "roaming" capabilities. VoIP should be able to eliminate long distance calls by using the Internet instead of the phone company.

Demand for network bandwidth continues to be a challenge for the Newton Public Schools. Support for "Bring Your Own Device" (BOYD) is fast becoming a component of education in the 21<sup>st</sup> century. Current projections anticipate each student will bring an average of 2 mobile devices to school. Providing a wireless network to handle this demand is critical; providing enough bandwidth upstream requires scalability, management and redundancy in front of these wireless endpoints.

Inasmuch as "Bring Your Own Device" (BYOD) has already arrived at the Newton Public Schools and the Newton Free Library, there is no doubt that municipal areas will be next. Policies, practices and procedures must be implemented prior to this arrival. Municipal challenges in this new, mobile environment include the technological ability to meet Freedom of Information Act (FOIA) requests and the protection of the information of constituents. While the expectation is that more desktops will be replaced with mobile solutions to better address evolving job requirements and the ever-growing demand for access to real-time data, securely delivering that data into the field will become a high priority challenge.

While our physical plant is established, all IT entities continue to invest in Storage Area Network (SAN) solutions with virtual servers hosting the applications that access this data. The virtual server framework provides efficiency in a myriad of ways; from power conservation (reducing dedicated server foot print), to ease of administration, to downtime reduction, to fast provisioning of additional virtual servers as new software applications are acquired. SAN technology allows for similar efficiencies managing disk storage

devices as a separate network subsystem rather than being physically connected to each server. This architecture allows for quickly assigning additional storage space from the SAN to individual physical or virtual servers and managing SAN disk space efficiently from the central SAN system. The continued investment in virtual servers and SAN technology will save the City time as well as money.

Consolidating our data centers frees up time, as well as environmental and maintenance costs, valuable building office space, and centralizes equipment and security. After the initial investment of time and money to consolidate sites, the ongoing savings will easily outweigh the consolidation costs.

### **Software, Applications, and Process Improvements**

**Components:** *Financial Systems, Email and Calendaring System, Asset Management, Work-Order Processing, Integrated Solutions, Increased Operational Efficiencies, Better Decision Making, Coordinated Resources, Interdepartmental Collaboration, Increased Communication with the Public*

**Overview:** Interdepartmental cooperation is no longer an afterthought or a possible byproduct. Grander schema must be developed with forward thinking, multi-department encompassing solutions. A universal application that meets the needs of many departments but built on a shared core module allows everyone to share information, stay apprised, and minimize software and server maintenance, licensing and support.

A great example of a universal solution will be the foundation of a “One Stop Shop” enabling applicants to visit one counter or webpage, find all information, forms, feedback and an acceptable payment procedure thus increasing efficiencies and customer satisfaction while reducing counter lines, business and resident frustration, and even parking.

This is what systems such as Public Safety, Community Plus and Hansen offer to the City. No system will be a perfect fit for everyone; however the value of a few all-encompassing systems performing the needs of many independent groups brings a value of consistency and fluidity that extends far beyond that of silo solutions that cater only to individual groups.

Legacy applications should be removed before their shortcomings compound into farther reaching issues. Legacy services can be added in to existing enterprise-wide applications with minor modifications to processes. Working in partnership with the Information Technology Department the benefits and incentives of conversion will become readily apparent.

### **Security**

**Components:** *Disaster Recovery, Alarms, Monitoring, Video Based-Security, Policy, Consistent Solutions across Departments.*

**Overview:** Video monitoring of schools, public buildings, public spaces, weather forecasts, traffic, and known crime zones, to insure the safety of our students and community are a high priority. Responsibility varies by location and audience. Consistent solutions that work across all departments will provide efficiency, enable cooperation, and will allow us to consolidate back end equipment to conserve server needs, licensing, and maintenance and support costs.



We expect a vast and continually expanding need for video monitoring and security systems over the next five years. The rash of catastrophic events across the country has created a heightened awareness of the needs in this area and will require action on the part of the City to protect, as best we can, our children, employees, and citizens in our municipal buildings. Currently, the school department and the library have short-term video solutions that meet current needs but may not address future requirements.

Additionally, we will need to standardize storage of historic video, develop consistent means of retrieval, and insure compliance with State and Federal laws while protecting the rights of our citizens.

To protect our data and networks security begins on the inside. We must continue to review, upgrade and create policies and guidelines. This will help fill loopholes, address new concerns that were historically non-issues, and fill policy needs for new technology-based opportunities. With the installation of new technology and solutions we must remain vigilant in the fight to eliminate potential exploits so as to protect the City, its employees and its residents.

### **User Support & Training**

**Components:** *Training for IT Staff and End Users, Enhanced User Awareness of Technological Opportunities, Opportunities for Remote Access, BYOD Awareness*

**Overview:** In-house training for technical staff is critical in preserving the City's IT investments. Rapid changes in technology and solutions require frequent, in-depth training and re-education on these new or updated systems and solutions.

Keeping the IT staff well versed in current needs is only one piece of the challenge; training for users must be available on a regular basis. Time and again functions and processes that are performed infrequently are often the source of mistakes. Keeping employees well versed in changes, such as normal business practices; new departments coming on board to new or existing systems; better methods of accomplishing tasks; and new opportunities for solving old dilemmas; all require leadership, dialogue and communication from the IT entities of the City.

The best training practices include repetition. If that is not an option, frequent training opportunities are critical to keeping all staff current.

Ensuring all employees are aware and informed of changes in policy and how it affects them should have a structure and delivery mechanism that insures everyone remains knowledgeable.

Training delivery methods have evolved as well. Everyone is familiar with traditional class training, but there are new methods that may work even better; solutions such as pre-recorded classes available from the internet/intranet, sophisticated FAQ web pages, even user groups can supplement the old teacher-pupil system.

The school department set a standard for maintaining an educational pace for technical staff. This training is testament to the sophisticated network the school department maintains spanning nearly two dozen buildings. Preparing teams by using predictions and expectations of existing trends help keep staff ahead of the technology wave. Training is not cheap but the cost of not training may be even more expensive.

### **Categorizing the Plan – The Approach**

The five year plan will be a fluid document that will need to be reviewed and updated on a regular basis. Some goals will be recognized while others will evolve for reasons varying from technological advances to a redefinition of the City's needs.

For instance, devices shrink in size while becoming increasingly mobile. While the price of a tablet is less than a desktop PC, and is more energy efficient, its life expectancy is reduced due to use and exposure to less than perfect working conditions. Yet more and more, the current needs of City employees are in the field, where the "action" is, whether it is filing inspection results or complaints, closing work orders, or requesting details from the City's GIS system. There is a cost for mobility and operational efficiency and many facets will need to be evaluated.

With this in mind we must first consider how we want to construct our infrastructure; it must be scalable, resilient and infinitely tailor-able.

Furthermore, to design a plan we will need to:

1. Be aware of the needs of all departments, not just the high visibility/public-facing groups;
2. Recognize, assist and address the long term goals of Schools, DPW, Police and Fire, Library, FIS, Health and ISD, as well as each of the other departments;
3. Use the successes of other municipalities as a model for our own;
4. Reuse current and new resources across departments, building partnerships, efficiencies and recognizing cost savings;
5. Create policies enabling consistency to our solutions;
6. Enable compatibility to allow disparate systems to communicate.

Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
<b>Physical Infrastructure: Details</b>									
Citywide Fiber Project	A modern, redundant fiber network is the primary need for schools to move their technology forward. It is also paramount to the municipal side of the city in building a mirrored, disaster prepared system capable of keeping financial systems and critical data available in the event of catastrophe. The “loop” design ensures a secondary path to any location and with spanning tree enabled switches, costs for multiple paths can be kept in check. Extra fibers allow dedicated connections outside of the data network for special projects, security initiatives, one time interactive projects and even live feeds to NewTV.	Cable Franchise Fees	\$ 1,500,000	\$ 1,200,000	\$ 300,000	\$ -	\$ -	\$ -	\$ -
Convert dedicated file servers to virtual servers on our storage area network	Operating virtual servers on a storage area network is no longer new technology; it is tried and true. Schools and Library have successfully implemented SANs with great results. Departments cannot tell the difference. The beauty of a SAN is that changes can be made on the fly with no inconvenience to the end users. It will also be the future means for our financial systems – Pentamotion (Finance Plus, Community Plus) and Munis which means that our current solution of purchasing similar hardware and storing offsite will allow us to better invest precious funds.	IT Operating Budget	\$ 150,000	\$ 100,000	\$ 40,000	\$ 10,000	\$ -	\$ -	\$ -
Expand Middle School wireless	Expand Middle School wireless	NPS Operating Budget	\$ 100,000	\$ 100,000					
Update Classroom Projection Systems at Newton South	Update Classroom Projection Systems at Newton South	NPS Operating Budget	\$ 60,000	\$ 60,000					
Mobile Computing - Software	Firehouse software has been selected as the core software application for fire apparatus and fire prevention inspections. This core software will provide integration to QED the current dispatch application. Firehouse has numerous application modules and is always expanding their offerings. The modules that have been selected at this time support dispatch, hazardous materials, in-service inspections and fire pre-planning. As new applications are developed a review should be completed to see if they are relevant to the mobile computing goals of the fire department. Community Plus plays an important role for centralized databases integrating with other city departments for Inspections, Fire Permitting with query only capabilities from all fire vehicles. As part of the mobile data project tablets for Fire Prevention personnel will be added as well as a server with direct wireless access to support the mobile devices and EOC operations.	Fire Operating Budget	\$ 75,000	\$ 50,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000

Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
Mobile Computing - Hardware	Ruggedized laptops are currently being installed in all first line engines, ladder trucks and the Deputy Chief's vehicle. Additional computers such as tablets that are not vehicle dependent need to be added for other divisions and personnel including Chief of Department, Assistant Chief of Operations, Fire Prevention, Communications and Supply Divisions to allow access of data, codes and related information pertinent to each of these groups	Fire Operating Budget	\$ 150,000	\$ 50,000	\$ -	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
Consolidate technology purchases.	Currently we replace 2 or 3 PCs in a department by giving new equipment to the critical users and trickling down their equipment to "secondary" users. In some cases, where an employee spends their day running a financial application in terminal mode, a new PC does not offer much in efficiency. If an employee is crunching numbers or word processing or building presentations or other graphically intensive work like GIS, horsepower is critical. With roughly 600 PCs in the city, replacing 100 per year would mean an investment of approximately \$40,000 per year, every year and we would still have 100 PCs in production that are 6 years old at any time. We currently spend about \$15,000 per year for PC replacement. Public Works finds money in the neighborhood of \$10,000 per year. Police, Fire and Library have their own budgets as well. Our Laserjet printers are aging, but our printer maintenance contract keeps them running extremely well. It may be in our best interest to focus more on the combined office copier, scanner, fax machines instead of replacing the Laserjets when they reach end of life.	FY14 Free Cash	\$ 240,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
Druker Auditorium Presentation Technology Updates	Druker Auditorium last received a bare-bones upgrade to its presentation technology in September 2009. The current system is not user-friendly and requires too much manual attention to use successfully. Upgrades needed include: Equipment mounted in a wall-inset rack; New sound amplification/mixing system; New speakers (including replacing can speakers in ceiling and exploring new wall-mounted presentation speakers); Rack mounted computer for presentations; Upgraded assisted listening devices; DVD/VCR/Blue-Ray/Cable television display capabilities; Ability for presenters to hook up their own laptops; upgraded projector that can accept modern video-in links; everything (Including the lighting system) controlled by a Crestron control system.	Cable Franchise Fees	\$ 60,000	\$ 40,000	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000
Enable Microsoft Exchange or other cloud-based application to serve as our single municipal solution for E-Mail and Calendars.	It is understood that an acceptable email and calendar system is critical. A new system should be in place by June 2013. It has not yet been determined whether a cloud solution is financially in our best interests, especially with the news that Microsoft cloud services failed during Hurricane Sandy and again during a routine software upgrade. Maintaining local control ensures our support always receives the highest priority as we have demonstrated with the existing mail system over the past 15 years.	IT Operating Budget	\$ 180,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000

Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
Upgrade scanning station to a more book-friendly scanner and user-friendly interface	Libraries are replacing flatbed scanners attached to computers with user-friendly "Document Kiosks" that guide patrons through a variety of scanning and printing projects. Example: Xerox BookCentre S7141. Installing this type of kiosk will reduce staff time needed helping patrons with a "clunkier" solution and increase the utility available to patrons.	Library Operating Budget	\$ 60,000	\$ 30,000	\$ -	\$ -	\$ 30,000	\$ -	\$ -
Consistent wireless services / Add Access Points w/ Ample Bandwidth	Many departments have installed wireless networks with no knowledge of what other departments have done or were planning to purchase. Simple communication and cooperation can reduce this jumble. Working together we can have a consistent wireless network allowing an employee to access their data from any city or school building without requiring a Masters' Degree in Computer Science.	City Operating Budget	\$ 75,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ -	\$ -	\$ -
New UPS for Police Headquarters	Keeping Dispatch up and running during blackouts is critical to ensuring the safety of the City. The current UPS has merely been a glorified surge protector for the past few months.	FY14 Free Cash	\$ 32,000	\$ 22,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000
Communication Infrastructure (Internal Wiring)	Develop a city wide building structured premise wiring replacement program. The majority of the city's telephone wiring is Category 3. It was not upgraded or replaced when the new phone system was installed in 2002-2003. Only buildings or areas within buildings that have been renovated have had new category 5E wiring installed. Funding for cable, materials and hardware should be established so that over the next few years the Fire Departments Communications Division can systematically replace the wiring in areas that do not have plans for renovation in the near future.	IT Operating Budget	\$ 180,000	\$ 20,000	\$ 20,000	\$ 50,000	\$ 50,000	\$ 20,000	\$ 20,000
Phase in Voice Over IP as buildings are overhauled or rebuilt, with IT assisting in this responsibility.	By bundling the cost of a new phone system while overhauling or rebuilding, the pain of paying for a new system is reduced. In discussions with Mitel we have been told that much of the exiting back end of the phone system can stay while VoIP controllers can be installed on the front end. The replaced equipment will make for a good bank of parts which is inadequate at this time. Without a doubt our next phone system will be VoIP. To do it all at once would be a daunting cost with a challenging group at the core of the project. A site by site implementation would reduce any downtime while moving us forward gracefully.	IT Operating Budget	\$ 180,000	\$ 20,000	\$ 20,000	\$ 50,000	\$ 50,000	\$ 20,000	\$ 20,000
Expand deployment of iPads and carts	Expand deployment of iPads and carts	NPS Operating Budget	\$ 120,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
Collaborate Disaster Recovery with IT	It is critical that IT and FIS develop a business contingency plan. Being able to continue day to day financial business operations is essential to the maintain the public confidence and fiscal responsibility of the city.	IT Operating Budget	\$ 40,000	\$ 20,000	\$ -	\$ 10,000	\$ -	\$ -	\$ 10,000
Implement a second firewall as a failover.	Schools, Municipal and Library networks are fed by multiple ISPs, and load balanced in front of our firewall. Second firewalls at each site as a failover is common practice and we agree it is highly desirable.	IT Operating Budget	\$ 73,000	\$ 13,000	\$ -	\$ -	\$ -	\$ 30,000	\$ 30,000

Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
More / better tablets / e-readers	The Library has successfully piloted e-reader lending programs and the deployment of tablets for patron use. Expanding these programs will help keep up with demand and changes in the technology.	Library Operating Budget	\$ 72,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000
RFID tags, hardware and software	The Library needs to move forward with tagging its collection and obtaining the equipment to write/read the tags. This will help make us more interoperable with existing RFID Libraries (and those converting to RFID in the future) and making the checkin/checkout process more efficient and less error-prone.	Library Operating Budget	\$ 36,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 2,000	\$ 2,000	\$ 2,000
Replace core and closet networking switches, connect via fiber	The Library has robust internet uplinks but the path between individual workstation and the edge of our network is slow - mostly 10/100MB. Upgrading to gigabit intermediary switches and connecting such switches to a new core switch via fiber will remove this bottleneck.	Library Operating Budget	\$ 24,000	\$ 10,000	\$ 10,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
Computer Hardware Replacement	Develop a hardware upgrade/replacement program for Fire Headquarters and all Fire Stations. Hardware should include PC's as well as connectivity such as switches and fiber transmission equipment. Currently stations 1, 2, 3 and 10 are in need of both PC replacement and switch upgrades.	IT Operating Budget	\$ 48,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000
Expand SAN and backups	New server(s). Current production server is not adequately backed up by the white box servers. A new server could allow us to expand use of Hyper-V and be backed up by the current production server. White box servers could be relegated to testing and accepting backup file dumps.	Library Operating Budget	\$ 36,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000
Administrative Hardware and Software	To accommodate needs of the Fire Prevention office use of Community Plus and other applications commonly used by Inspectional Services, Health Department etc. This would allow sharing of important data that affects all of these agencies for building safety and code enforcement.	IT Operating Budget	\$ 30,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
Emergency Alarms	Transmitting equipment in school and city buildings should be upgraded to accommodate the transmission of other emergency alarms such as medical, AED deployment, panic/lockdown etc. in addition to fire alarm. The current public alarm reporting network supports these additional functions.	IT Operating Budget	\$ 30,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
Move to thin clients and virtual PCs where possible as a means of cost saving.	Many departments or subdivisions run their PC all day long as merely a terminal connecting to a Financial System such as Finance Plus or Munis. The wonderful technological advances of Windows and graphics are not employed or needed. Running thin clients could reduce expenses.	IT Operating Budget	\$ 30,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
Wireless printing for patrons / New public color laser printers	The public's use of personal laptops (etc.) on our wireless network has grown significantly and it's time to bring the ability to print to Library printers to our patrons. Existing public printers, which will see increased use, are aging and need to be replaced with ones that can accept HP's ePrint jobs.	Library Operating Budget	\$ 24,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
New Firewall for Library	Library depends on an old Cisco 2811 router and a Barracuda link-balancer protect the network, although they both have security features. We need to move from "router with firewall features" to	Library Operating Budget	\$ 4,000	\$ 4,000	\$ -	\$ -	\$ -	\$ -	\$ -

Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
"firewall that routes."									
Install Firewall for Wireless Access	Outside of our protected network, offers functionality as well as convenience.	IT Operating Budget	\$ 2,000	\$ 2,000	\$ -	\$ -	\$ -	\$ -	\$ -
Radio Communications Site	The backbone of the city's public safety radio system is the tower and communications equipment building located at the Waban Hill underground reservoir. The current building and tower were built during the 1940's by Raytheon. Raytheon turned the tower and building over to the city sometime after World War II. This is the main site for the fire and police radio systems. Over the years additional equipment has been added to support the fire and police systems as well as other regional public safety communication systems. Additional equipment has been added over the years to both the tower and building without any review of the structural or RF conditions of the tower including intermodulation studies. The building is metal frame with galvanized steel walls constructed on a light concrete pad. The entire electrical system including overcurrent protection, grounding, lightning protection and standby power is in dire need of replacement. This site is the core of the city's emergency radio communication network and is a single point of failure to cease or gravely impede emergency communications.	CIP/Bonding	\$ 360,000	\$ -	\$ 360,000	\$ -	\$ -	\$ -	\$ -
Computerized Maintenance and Management System for DPW	From vehicle maintenance to traffic and curb stones to sewer pipes, the City needs a modular system to address the myriad needs of Public Works and enable an interface to other supporting departments as well as a transparent means to fully run an incorporated customer service / 311 system	DPW Operations	\$ 260,000	\$ -	\$ 160,000	\$ 40,000	\$ 20,000	\$ 20,000	\$ 20,000
Private and Public portals using cloud and remote access solutions to enhance performance.	Removing locations as an obstacle enables a whole new set of possibilities, especially once our new infrastructure is operational.	IT Operating Budget	\$ 60,000	\$ -	\$ 30,000	\$ -	\$ 30,000	\$ -	\$ -
Library Server Room needs an overhaul	Server room conditions: New UPS, rack and cooling. UPS is 7-8 years old, rack is an old 'telco' rack and cooling is provided by two air conditioners mounted on shelves. All three next-generation solutions could be combined into a single vendor-driven solution, like APC.	Library Operating Budget	\$ 30,000	\$ -	\$ 25,000	\$ -	\$ 5,000	\$ -	\$ -
Public computer workstations - update hardware, number available, location (move computer lab)	Many publically available computer workstations are aging and the Library's main computer lab needs some re-thinking as to location. Developing a new computing center with newer hardware will increase the use of the computers and provide better service to the public.	Operating Budget	\$ 45,000	\$ -	\$ 15,000	\$ -	\$ -	\$ 15,000	\$ 15,000

Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
New Fire Headquarters – Emergency Operation Center (EOC)	Equipment and infrastructure requirements for the Fire Headquarters will be dependent on the new building design. Currently the Fire Departments cable system originates on the first floor of the existing Fire Headquarters building. All cabling is terminated on cross-connect and surge protectors as required by the National Electrical Code. This cable infrastructure supports the Public Emergency Alarm Reporting System which includes alarm transmitting equipment connections to city and private buildings as well as publically accessible transmitters, fire and MetroFire radio systems, fire station alerting system and various monitoring and signaling equipment. Depending on the configuration of the new building temporary facilities may have to be constructed to accommodate continuous operation of these systems at Fire Headquarters and the Combined Dispatch Center.	Station 3 Override Funds	\$ 300,000	\$ -	\$ -	\$ -	\$ 250,000	\$ 25,000	\$ 25,000
Consolidate Data Centers	Consolidation of data centers will reduce overhead costs and enhance opportunities for business redundancy, backups and disaster recovery. It will also free up space.	Station 3 Override Funds	\$ 250,000	\$ -	\$ -	\$ -	\$ 250,000	\$ -	\$ -
Document network layout.	Using a universally accepted application like Visio, document the entire network for better understanding, support and as key documentation should disaster recovery crews need to run the network.	IT Operating Budget	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bring more departments into the Community Plus system and abandon their silo data systems.	The success of ISD can and should be duplicated to Fire and Health. The centralized data creates efficiencies in myriad ways – from single support systems to universal holds, from focused training that spans departments to mobile communications that could save a life, departments may need some Executive influence to convince them to move forward. In most cases, an initial review of processes is important as we don't simply want to run a new system that emulates history without ample justification.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Predict and prepare for “What’s Next” by building scalable solutions not dead end, short term quick fixes.	A policy and communication initiative with no purchase costs. Requires constant communication with department heads and project leaders. It means the IT Department is aware of the changing needs of all departments and can bring similar needs under a single umbrella solution with no sacrifice of individual requirements. A dialog initiated by the CIO gives the department head more time to consult, formulate need and respond at their own pace. It also allows them to find their voice and not play second fiddle to other more aggressive requests. Reducing meeting time and enabling better needs analysis is efficiency unto itself.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Redeploy upgraded teacher computers for student/classroom access	Redeploy upgraded teacher computers for student/classroom access	No Cost	\$ -	\$ -					



Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
Update HS Wireless	Update HS Wireless	NPS Operating Budget	\$ 100,000		\$ 100,000				
Update teacher laptops at High Schools	Update teacher laptops at High Schools	NPS Operating Budget	\$ 100,000		\$ 100,000				
Install Phase One of the Media Dist System	Install Phase One of the Media Dist System	NPS Operating Budget	\$ 80,000		\$ 80,000				
Infrastructure			\$ 5,228,000	\$ 1,943,000	\$ 1,437,000	\$ 363,000	\$ 855,000	\$ 310,000	\$ 320,000

Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
<b><u>Software, Applications, and Process Improvement: Details</u></b>									
Complete outfitting elementaries with proj. and doc. camera systems	Complete outfitting elementaries with proj. and doc. camera systems	NPS Operating Budget	\$ 150,000	\$ 150,000					
Update K-3 Laptops district-wide	Update K-3 Laptops district-wide	NPS Operating Budget	\$ 150,000	\$ 150,000					
Working with FIS ensure Financial System updates, revisions and migrations run flawlessly and allow for cross training of personnel.	Financial Information Systems manages the some of the most critical applications in the City. IT support is vital to their success. We expect to continue supporting FIS in an expeditious manner as would be expected for financial support in any industry.	FIS Operating Budget	\$ 240,000	\$ 80,000	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
Complete Outfitting Newton South with document cameras	Complete Outfitting Newton South with document cameras	NPS Operating Budget	\$ 60,000	\$ 60,000					
Expand Student Access to laptops/desktops at the Middle Schools	Expand Student Access to laptops/desktops at the Middle Schools	NPS Operating Budget	\$ 60,000	\$ 60,000					
Continue to Implement OurNewton, the digital learning platform	Continue to Implement OurNewton, the digital learning platform	NPS Operating Budget	\$ 80,000	\$ 40,000	\$ 40,000				
Remain Current with upgrades from Munis and Sungard	As new features are developed by software vendors, we should take advantage of the efficiencies that new technology offers as well as to remain compliant with software life cycle required by the vendor.	IT Operating Budget	\$ 160,000	\$ 40,000	\$ -	\$ 40,000	\$ -	\$ 40,000	\$ 40,000
Update Lab and Library computers at Netwon South	Update Lab and Library computers at Netwon South	NPS Operating Budget	\$ 40,000	\$ 40,000					
Document Management System – Laserfiche bring success to other departments.	With a full time archivist on staff, a consistent system for storing documents, especially historical data is vital. Assessing, HR and the School Department have achieved great success with Laserfiche. The hardware is already in the city; we would need only purchase additional licenses, training and a select few high resolution scanners.	City Operating Budget	\$ 150,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
Update Special Ed classroom computers at Newton North	Update Special Ed classroom computers at Newton North	NPS Operating Budget	\$ 20,000	\$ 20,000					
Standardize video production to promote reading	Standardize video production to promote reading	Police Operating Budget	\$ 90,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000

Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
Implement new Financial Modules that Benefit the City	It is important to stay current with new software modules as they are developed by the 2 financial software packages used by the City. New modules and current software releases offer increased functionality and more effective processing.	No Cost	\$ 30,000	\$ 10,000	\$ -	\$ 10,000	\$ -	\$ -	\$ 10,000
Document all applications, methods of installation, support contacts.	Documentation in IT is critical to allow others to run processes without having to relearn an entire system. In the event of disaster recovery, or simply in the wake of a week's vacation, documentation eliminates the islands of knowledge which we all try to avoid.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ensure a minimum level of expertise for all employees on required systems, i.e. Treasury – Munis, Excel and e-mail.	Currently, IT offers training to those that request it. What if annual COLA raises did not automatically apply to computer users who could not demonstrate proficiency in the applications they are responsible for? What if an inability to consistently prove proficiency could result in termination? While unions would probably horse collar these ideas, we can certainly devise constraints that will influence more employees to take training seriously.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mandatory training for all new employees.	With some systems such as the Financials, Community Plus and GIS being so city-specific, to not offer immediate training to new users is counterproductive to the promise and expectation of efficiency with a new hire. Just as each new hire must read our policies, be made aware of benefits and other personnel details, a strong software toolset will enable new employees to get started on the right foot.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Process improvements – reduce printing and work flow time, increase efficiencies.	This is more of a common practice than a task specific entry. These type of processes take time, a leap of faith and patience. Enhancements to our PO and Contract Process as well as prompt pay discounts were all results of one process improvement team that invested one to two days per week for three months. Painful during the process, the results were undeniably successful.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual training in Payroll	An annual training session should be offered to remind end-users of tasks that are processed only once a year, as well as meeting the new job responsibilities of the end-users.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Continue to document procedures	Documentation of all operational processes is required to guarantee accurate outcomes.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Continuing Support (hardware & software) from the IT Dept to Financial Information Services Dept.	It has been the practice that any new major software upgrade requires the purchase of hardware to handle the greater capacity and functionality of new software upgrades.	IT Operating Budget	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Coordinate with IT the archival and backup of Financial data	To safeguard the on going financial application operations, it is critical that nightly backups of financial data be maintained. Any loss of data would impact the efficiency of every department. To be compliant with state mandated record retention laws, archival financial data needs to be maintained.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
Electronic Plan Acceptance	Community Plus needs to be used in new ways to accept, review, print CAD drawings and submitted construction documents for required plan review and approval. Currently the Fire Prevention office receives all construction plan documents on paper. This requires a tremendous amount of physical storage space and makes it very difficult to provide efficient review and approvals that have to be forwarded to Inspectional Services for further action and review.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Implement Active Directory and Federation Services (Cloud based AD).	We have created AD on our network and have brought over a few test departments. The Federation Services is a cloud facing system that will allow local and remote synchronization and administration. AD itself is free. We repurposed a gift server from Library to host the Federation Services on our DMZ	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
One Stop Shop for Permitting, Inspections and Code Enforcement.	After many years we have the eGov web portal piece of Community Plus running and enabling queries. The next step is to enable high volume contractors to do their own data entry and pay online for later review by inspectors prior to importing into the Community Plus Live database. Next on the list we would enable residents to create accounts to register complaints which will be addressed and investigated by City Inspectors.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Expand learning Commons concept to elementary level, develop standards	Expand learning Commons concept to elementary level, develop standards	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Enhance Teachers' role in training and piloting OurNewton	Enhance Teachers' role in training and piloting OurNewton	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Evaluate eBooks as a core collection for specific criteria	Evaluate eBooks as a core collection for specific criteria	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Evaluate Library space to enhance	Evaluate Library space to enhance	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Install interactive tech in libraries, learning commons and labs for Interactive inst.	Install interactive tech in libraries, learning commons and labs for Interactive inst.	NPS Operating Budget	\$ 48,000		\$ 48,000				
Continue expansion of student laptop/computers at all middle schools	Continue expansion of student laptop/computers at all middle schools	NPS Operating Budget	\$ 40,000		\$ 40,000				

Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
Continue Implementation of Google Docs district wide	Continue Implementation of Google Docs district wide	NPS Operating Budget	\$ 40,000		\$ 40,000				
Collaborate to evalate digital resources	Collaborate to evalate digital resources	No Cost	\$ -		\$ -				
Software			\$ 1,358,000	\$ 690,000	\$ 208,000	\$ 170,000	\$ 40,000	\$ 160,000	\$ 90,000

Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
<b>Security: Details</b>									
Video surveillance	Is an important part of emergency management. Fixed and mobile equipment can be used to make assessments and decisions during various types of events and emergencies. As the city's video network is designed and deployed provisions should be made for monitoring and control at both Police Headquarters and Fire Headquarters for EOC operations.	CATV Franchise Fees	\$ 120,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 10,000	\$ 10,000	\$ 10,000
Implement Software Testing for All Prospective Employees.	Even in the past year we have hired employees who have underwhelmed us with their computer skills: these are people who have been hired to run a PC for 40 hours per week. While some positions use the PC as a tool, many, especially on the Financial side should have their desktop mastered and have enough skill that they no longer need to keep passwords taped to their monitor and notes on how to do repetitive tasks that should be ingrained.	Operating Budget	\$ 4,000	\$ 4,000	\$ -	\$ -	\$ -	\$ -	\$ -
Public Safety systems – departments need a consistent platform be it in a vehicle or in an office.	Avoid silos! Transparency and ease of use is critical. Public safety systems must communicate with one another just as the administrators of these systems should be vigilant to maintain a constant, positive dialog.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Refine and enforce city policies concerning acceptable use.	The City Telecommunications Policy was last rewritten with great leadership and oversight from Law and Human Resources. While the threats of punishment were included in the document, enforcement and awareness of the policy are low. Just as Ethics and Sexual Harassment awareness are key concerns, the Telecommunications Policy was written to protect the city, the employees, the systems and infrastructure and the data of our constituency.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Review user rights and redact unnecessary permissions.	Reviewing software and system access rights is something we practice during down time or during a system migration. As employee responsibilities change, rights should follow suit.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Write Standard Operating Procedures that mesh in with the SOPs of other departments, specifically, FIS, Human Resources and the Wires Division of the Fire Department.	The success of SOPs in FIS and Purchasing are undeniable. The potential for lost communication between HR, IT and the Phones certainly exists. When forced terminations occur, communication works well as the process is manually walked through from beginning to end. When employees formally begin and end employment, standard notifications are not in place. Documentation in IT is critical to allow others to run processes without having to relearn an entire system. In the event of disaster recovery, or simply in the wake of a week's vacation, documentation eliminates the islands of knowledge which we all try to avoid.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Remote Access to Authorized Individuals	Police access (offsite) to critical data	IT Operating Budget	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Security</b>			<b>\$ 124,000</b>	<b>\$ 34,000</b>	<b>\$ 30,000</b>	<b>\$ 30,000</b>	<b>\$ 10,000</b>	<b>\$ 10,000</b>	<b>\$ 10,000</b>

Description	Overview	Funding Source	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
<b>User Support &amp; Training: Details</b>									
Enhance Internet Access.	Software as a Service (SaaS), cloud applications and storage, remote databases all require a robust internet connection to enable people to accomplish their tasks. This is not only a solution for the road warrior. Even at a desk, applications in the cloud dictate a reliable, speedy internet connection. The School Department has enabled their side to bring in 3 high speed Ethernet Internet connections. Currently, the city has mirrored their solution on a smaller scale. We have put in a bandwidth aggregation tool and have two internet service providers. We would like to have a more attractive contract with Galaxy (contract ends on July 1) and bring Comcast in as a third internet provider to guarantee availability for all municipal needs.	All IT Entities have budgets for Internet access	\$ 360,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000
24/7 Support	Public Safety would like an on-call sysadmin to be able to respond to issues at any time.	TBD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Consolidate Data Silos (Public Safety systems, CommPlus, etc.)	Transparency of systems enabling real time data to everyone from first responders to casual reporting on our website.	TBD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Employee Training in Payroll and Inquiry	New Employees using either financial package need training in the use of that software to accurately perform their assigned tasks.	No Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Roll out more Credit Card/Internet Payment opportunities	The 21st Century city hall should never require citizens to enter a building to perform simple tasks.		\$ -						
<b>User Support &amp; Training</b>			<b>\$ 360,000</b>	<b>\$ 60,000</b>	<b>\$ 60,000</b>	<b>\$ 60,000</b>	<b>\$ 60,000</b>	<b>\$ 60,000</b>	<b>\$ 60,000</b>

	Estimated Cost	FY14	FY15	FY16	FY17	FY18	FY19
<b>Grand Totals</b>	<b>\$ 7,070,000</b>	<b>\$ 2,727,000</b>	<b>\$ 1,735,000</b>	<b>\$ 623,000</b>	<b>\$ 965,000</b>	<b>\$ 540,000</b>	<b>\$ 480,000</b>

## Acknowledgments

In 2013 Mayor Warren challenged the City's Technology Staff to create a Technology Cluster; a group of IT representatives from across the city including Police, Fire, Schools, Library, Financial Information Systems and the municipal IT department. Goal number one was to build a vision and technology plan to guide the city. While funding for desirable projects was not specifically expected to be an outcome of this group, we hoped that we would find that many of our goals were quite similar.

### Participants in the Technology Cluster

Joseph Mulvey	Information Technology Department
Gregory Ansaldi	Information Technology Department
Ann Cornaro	Financial Information Systems
Steven Smith	Newton Police Department
AC Paul Chagnon	Newton Fire Department
Jeffrey Knight	Newton Fire Department
Phil McNulty	Newton Free Library
Ryan Hanson	Newton Free Library
Alan Mandl	Newton Law Department
Leo Brehm	Newton School Department
Robert Rainville	Newton School Department
Samuel Mayanja	Newton School Department
John Miker	Department of Public Works

Newton has always had a legacy of being a leader in the community and in the Commonwealth. There is no doubt that Newton is a complex machine with many moving parts. Our technologies serve all facets of the city, its students, its teachers, our constituents, employees and more. Needs are addressed yet efficiencies and consistency are not always achieved. Sometimes technologies leave old solutions behind, yet the commitment to funding the solution was not forthcoming. With the City on firmer financial ground, the current administration is beginning to amply fund many projects that were rejected five years ago. We applaud Mayor Warren and his staff for his renewed technological fiscal investment.

The dedication of time and attention to this project by its members attests to its success.